

AMERICAN BEE JOURNAL



GEORGE W. YORK,
Editor.

CHICAGO, ILL., APRIL 3, 1902.

FORTY-SECOND YEAR
No. 14.

WEEKLY



APIARY OF JOHN H. BLESSING, OF LINN CO., IOWA.
—(See page 212.)

THE AMERICAN BEE JOURNAL

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A. Getaz, and others.

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National Bee-Keepers' Association

OBJECTS:

- To promote and protect the interests of its members.
- To prevent the adulteration of honey.
- To prosecute dishonest honey-dealers.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.



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Red Clover Queens FOR 1902 FREE!

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We have arranged with the queen-breeder who furnished Long-Tongue Red Clover Queen for us during the season of 1901, to fill our orders this season. Although fully 95 percent of the unmated queens he sent out were purely mated, this season all that he mails for us will be warranted purely mated.

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This indeed is an opportunity to get a superior Queen, and at the same time help swell the list of readers of the old American Bee Journal.

We are now ready to book the Queen orders, and also to enroll the new subscriptions. Remember, the sooner you get in your order the earlier you will get your Queen. We hope that every one of our present readers will decide to have at least one of these Queens. Address,

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Your Name and Address on one side—Three Bees on the other side.



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Chicago, Ill.

Please allow about two weeks for your knife order to be filled.

ESTABLISHED IN 1861 AMERICAN THE OLDEST BEE-PAPER IN AMERICA BEE JOURNAL

42d YEAR.

CHICAGO, ILL., APRIL 3, 1902.

No. 14.

* Editorial. *

A Large Edition of this number of the American Bee Journal will be mailed, some of the copies going to bee-keepers who are not now subscribers. We trust they will be so well pleased with it that they will want it regularly hereafter. Only \$1.00 will pay for it for a whole year—52 weeks—52 copies! It ought to be a good investment to any one who wants to make anything out of his bees.

The Chicago Convention Report is begun this week. While it has been some time since the meeting was held, it will read just as well as if it had been published sooner. We preferred to give place to the proceedings of all the other conventions first, and let our own local meeting come last. It will be a good report of a good convention, and will probably run in installments every week for two months or more. It was the best convention ever held by the Chicago Bee-Keepers' Association.

An Attempt to Outlaw Sweet Clover, says Gleanings in Bee-Culture, has been made in Ohio, and if Ohio bee-keepers are alive to their interests they will at once write to their Representatives and Senators urging the defeat of House Bill 598, which classes sweet clover among noxious weeds, and directs that township trustees shall cut it down whenever complaint is made. It is refreshing to know that at the Ohio Agricultural Experiment Station the Director is such a man as Prof. Thorne. Here is a letter from him to A. I. Root:

My Dear Sir:—If you find any serious attempt to have sweet clover declared a noxious weed, please let me know. I should consider such a declaration about as wise as one to call red clover such a weed, and will fight it with all my might. I was one of the first to call attention to the peculiar habit of this plant of growing on soils where no other plant will thrive, a little article of mine on this point having been published as far back as 1877, and quoted throughout the range of the agricultural press.

Yours truly,
CHAS. E. THORNE, Director.

The Colorado Foul-Brood Plan of managing so as to kill it out and at the same time get a crop of honey by shaking off nearly all the bees upon frames filled with foundation, was copied some time ago from the Rocky Mountain Bee Journal. Editor Hutchinson says it is really the Heddon method of transferring, and his advice that the work

should not be prematurely undertaken deserves strong emphasis. He says:

I might say, in a few words, that the old hive and its combs of hatching brood should be managed almost exactly the same as would the hive of a colony that had swarmed. In short, this method is nothing more or less than forced swarming, and the work should not be done until the colonies are nearly ready to swarm—perhaps some of them have swarmed. To attempt it too early, before the colonies are populous, the weather warm, and plenty of honey in the fields, would be disastrous.

He further says that the plan is really swarming, with the advantage that the swarming is done when we want it rather than when the bees want it, and quotes H. R. Boardman—one of the most reliable practitioners—as following the plan in his out-apiaries to solve the swarming problem. "He visits his out-yards about once a week, and every colony populous enough to swarm is thus 'swarmed' by the shaking-off process."

With regard to disposal of the brood taken away, enough bees are left to care for the brood, which is put upon a new stand, and Mr. Hutchinson suggests that after all brood is sealed the queen-cells should be destroyed and a cell of choice stock be given.

Wax-Worms and Basswood.—It was given out in Gleanings in Bee-Culture that basswood was the proper lumber for top-bars, because wax-worms would not burrow in it as they do in pine. Dr. Miller replied that basswood would warp and twist too much to be used in bee-hives, and later he says he has found unmistakable proof that wax-worms bore into basswood the same as into pine.

Ventilation of Bee-Cellars is a topic that is being ventilated in Gleanings in Bee-Culture by T. F. Bingham and G. M. Doolittle. The former advocates a ventilator 18 inches square, while the latter seems to think little or no ventilation is needed. "When doctors disagree," etc.

Bee-Keeping in the United States.—The Census Bureau, on March 31, issued a complete report showing that for the country as a whole, on June 1, 1900, there were 707,361 farms keeping bees, substantially one for every eight farms. These farms reported 4,109,626 colonies, valued at \$10,186,513, averaging a little less than six colonies to each farm reporting, says the Washington Post. The twelfth census is the first to report the number and value of bees, or the number of farms reporting them.

During the year 1899, there were produced 61,196,160 pounds of honey and 1,765,315 pounds of wax, of an aggregate value for the

honey and wax of \$6,664,904, or \$9.42 for each farm reporting the same. Of this value, 35 percent is from the North Central, 12 percent from the North Atlantic, 15 percent from the South Atlantic, 23 percent from the South Central, 14 percent from the Western States, and .1 percent from Hawaii. The products of Hawaii were 96,870 pounds of honey and 1,720 pounds of wax.

Of the States reporting honey, Texas reports the largest quantity, 4,780,204 pounds. California reports the second largest quantity, 3,667,738 pounds, and New York the third largest, 3,422,427. The counties showing the heaviest production are Fresno, San Diego, and Tulare, of California, and Tompkins, Cayuga, and Seneca, of New York.

We imagine that the reported pounds of honey, and also of beeswax, are far below the actual production. We think perhaps 700,000 farms where bees are kept must be somewhere nearly correct. Perhaps by the time the next census is taken more reliable aparian statistics can be had.

The British Standard Frame is 14x8½—not quite three-fourths the capacity of the Langstroth—and the British Bee Journal is emphatic in the opinion that an increase of size would be a backward step. Ten frames in a hive is considered about the right thing, that being about the same as 7½ Langstroth frames. There is, however, a controversy starting in the British Bee Journal as to the advisability of a change in frames. F. W. L. Sladen says:

When I was in America I was surprised to see the great diversity of sizes of frames used, and all were claimed by their advocates to be better for their purpose than any others.

Influence of Nurse-Bees.—F. B. Simpson—the man who is writing such an interesting series of articles in the Bee-Keepers' Review concerning the breeding of bees—thinks there must have been some very careless reading on the part of the American Bee Journal to allow it to say that Mr. Simpson inclines to the view that a changing of nurse-bees might produce a queen very different from what she would have been had her own sisters been the nurses. The carelessness, so far as there was any, was not in reading but in writing. It is true that Mr. Simpson inclines to that view, but he is far from being strongly inclined, and it would have been much better to have said that he inclines very slightly to that view. So far from taking the ultra view that some have taken, he expressed the belief that the influence of the nurse-bees "is undoubtedly extremely slight in comparison with the hereditary properties

of the combination of the germ-cell with the sperm-cell."

He quotes with astonishment the remark that "If the nurse-bees have as much influence on growing royalty as some have urged, it ought not to be difficult to prove it by a single exchange of eggs." If Mr. Simpson is familiar with European bee-literature, he must know that that statement is true, and if he will read again he will see that in making it there was no reference to him.

It may in turn be in order to ask whether it was careless reading or writing that allows Mr. Simpson to say: "Suppose that the editor of the American Bee Journal were correct in expectations, and also that there could be a marked difference in each generation, due to nurse influence." There is nothing on page 50 to show that there was any expectation whatever on the part of the editor of any change being made by a change of nurse-bees, although there is a possibility that such a thing may exist, but if it does, Mr. Simpson is no doubt correct that such a change must be very slight.

It seems that none of us have yet reached perfection, either in the art of expressing ourselves or deciphering the meaning of others, but with the practice of a little patience we may easily come to an understanding.

California Reports of late date seem to show that prospects for a honey crop are not so gloomy as formerly supposed.

Salt the Ants if you want to drive them away, says Frank Gilmore, of Connecticut. He says he has proven by experience that if salt is sprinkled wherever they are they will leave. If little red ants annoy the good housewife, put a tablespoonful of salt in a teacupful of water, dissolve well, and then pour it around where the ants enter.

This is such an easy remedy to apply, that any one who has both salt and ants can soon test the matter. If it is as effective as Mr. Gilmore says it is, a good many bee-keepers will want to extend to him a big vote of thanks.

Cane vs. Beet Sugar.—For years the British Bee Journal has strongly urged that those who feed sugar to bees should be sure that cane and not beet sugar be used. If that journal is right—and it is possible it is—we are in a bad case in this country, for there is probably not one bee-keeper in a thousand who can tell beet sugar from cane, and beet sugar, which formerly formed only a small portion of the sugar used, forms now the larger part, and is constantly on the increase.

Tongue-Length and Tongue-Reach.

—In Gleanings in Bee-Culture Prof. C. P. Gillette calls attention to the mistake that has been made in deciding from his experiments that there is no direct relation between tongue-length and tongue-reach, in spite of his saying: "I believe, for practical purposes, it may always be considered true that the bee with the longest tongue has the longest possible tongue-reach." It is true that according to his table of measurements it appears that tongue-length and tongue-reach do not correspond, but he does not con-

sider the measurements of reach as reliable as he does those of length, and says: "I place no value whatever upon my measurements of tongue-reach except to show how variable and unreliable such measurements are."

Weekly Budget.

THE EPWORTH HERALD, with its nearly 120,000 circulation every week, kindly published the item on "Comb Honey Not Manufactured," in its issue of March 29, which is its annual Easter number, and a beauty. The Herald has the largest circulation of any religious young people's weekly, being the organ of the Epworth League of the Methodist Episcopal Church. Its able and popular editor, Dr. J. F. Berry, is one of our very intimate friends, and would do all he could to aid bee-keepers in getting the truth about honey before the people.

BEE-HOUSE OF L. J. CLARK.—When sending the picture shown on this page, Mr. Clark wrote as follows:

I enclose a view of my bee-house, part of my apiary, and rear view of my residence. I was born in Vermont, Aug. 21, 1840; came to Minnesota June 1, 1858, and have grown up



BEE-HOUSE AND RESIDENCE OF L. J. CLARK, OF WINONA CO., MINN.

with the country. When 15 I enlisted to fill a vacancy in the 1st Minnesota Volunteers, but on account of my age, and the War coming to a close, I was not sent South. I was married when 23 to Lucie E. Balch, of Lockport, N. Y., with whom I lived happily for 17 years, when death claimed her, and since that time I have remained a widower. The two girls on the back porch are my daughters, May and Allie, aged 13 and 15 years.

Ever since I can remember I have taken much interest in bees, and when about 10 years of age had, at one time, about 7 colonies of bumble-bees, and enjoyed myself very much in watching the occasional bee that would come and go.

The year that I was 16, in June, I paid \$12 in hard cash, that I had earned by working out, for a colony of young bees in a very plain, unpainted box-hive, and I got up at 1 a.m. and went 12 miles so as to get there before the bees were out in the morning. Since that time I have had more or less bees the most of the time, although being engaged in other

business—milling, farming, etc. I have never made a specialty of bee-keeping.

I have lately secured a farm on the Mississippi river bottoms, that I think is a good location, especially for fall honey; so I expect to increase my apiary largely in the near future. At the home apiary, shown in the picture, our surplus honey nearly all comes from white clover.

L. J. CLARK.

APIARY OF JOHN H. BLESSING.—On the first page is a picture of the apiary of Mr. Blessing, concerning which he has this to say:

My apiary consists of 20 colonies in Langstroth and dovetailed hives, all 10-frame size. I began keeping bees about nine years ago, and was very successful until last year, when they didn't average over 20 pounds per colony. The hot winds killed all of the white clover, and there was no buckwheat sowed; but I am not discouraged yet, as I have hopes for better things.

My bees are all hybrids, but they are great workers when there is anything to do. They had the swarming-fever last spring, and I had quite a time with them.

January 9, 1902, I noticed the bees were flying quite freely; I had placed a bucket on a bench that had some rye and oats ground together, and the bees were very busy carrying it to their hives. I had intended this rye and oats for the pigs.

I have always wintered my bees successfully on the summer stands. The stakes which can be seen in the picture behind the hives are for holding straw. After nailing the poles to the stakes I pack straw in around the hives.

I read the "Old Reliable," and couldn't get along without it. I also have "Langstroth on the Honey-Bee." JOHN H. BLESSING.

HAVE THE BEST TOOLS.—Editor Hutchinson has this to say in the Bee-Keepers' Review, on the subject of tools for the apiary:

It is all right for a man with limited capital to put up with make-shifts. In fact, he is compelled to or go in debt for them. Get improved tools and machinery just as fast as the profits of your business will justify the expense. To squeeze along with imperfect tools, when the profits of your business will allow the purchase of good ones, is the poorest kind of economy. Don't let the habit of putting up with poor tools become so fixed that it can not be changed when conditions change. Another thing: Watch the conditions; study them closely; they may change so gradually that you do not realize the change.

Fortunately, bee-keepers require new tools, and there is little excuse for their using poor ones. The largest factor in the production of honey is labor, and anything that tends to lessen this factor should be given the most thoughtful consideration.

Convention Proceedings.

The Chicago Convention.

Report of the Semi-Annual Convention of the Chicago Bee-Keepers' Association, Held Dec. 5, 1901.

BY A SHORTHAND REPORTER.

The convention was called to order by Pres. George W. York, at 10:30 a. m., after which T. E. Hogge offered prayer.

Pres. York—As president of the Chicago Association, I am delighted to find so many here to begin with. We will now listen to the reading of the minutes of the last meeting, and also the financial report. We will do all the business up first, or at least most of it, before we start on the questions.

Sec. Moore then read the minutes, and also the financial statement, both of which were approved.

Pres. York—It affords me much pleasure to introduce to the audience Dr. C. C. Miller.

Dr. Miller—How do you do, audience?

Pres. York—I also want to introduce Mr. C. P. Dadant.

Mr. Dadant—Mr. President, I am a little bit ashamed.

Pres. York—You needn't be ashamed; you are good looking.

Mr. Dadant—I will be doing lots of talking anyway, so I will say nothing just now.

Pres. York—Mr. Green and Mr. Clarke will now distribute the paper slips for questions. Write one question on a slip and they will be passed at different times so we will have enough to go on with. You will have a chance to ask all the questions you wish before we get through. I would like to say a word about the membership while you are writing the questions. Our dues are \$1.00 a year, which dollar pays not only your membership for the Chicago Bee-Keepers' Association, but also the dues in the National Association. I would like to have every one become a member of the Chicago Bee-Keepers' Association. I hope you will be very prompt about writing questions, so that we will have them to go on with. Dr. Miller, I know, is just aching to talk.

Dr. Miller—I do want to say one word. I want to congratulate this Association on the plan of having the time not taken up with a lot of long speeches and papers.

Pres. York—Doctor, I think you had better sit down again.

Dr. Miller—Will you please keep still until I am done? Years ago, the pace was set in this very city by the old Northwestern, of having programs that were not programs in the ordinary sense of the term, and I believe now it is getting to be the common custom in all of the bee-keepers' meetings to have the time taken up largely in discussion. You know how it is; two bee-keepers get together, and the first thing they begin to talk about bees. They don't need any program. If I should happen to meet Mr. Dadant (that Frenchman, who got away, and came into this country in spite of all I could do)—if I should meet him, we wouldn't stop to discuss whether France or America is the best country, but we would begin to talk bees, and in this convention, by talking bees and having questions here and there, the time is put in profitably, and I don't know any reason why this Chicago Bee-Keepers' Association should not become a power; it is, I believe, and there is no reason why we should not have exactly the same meetings here as in the old Northwestern, and they were fine meetings, too, and I do know you can have a fine meeting here to-day.

Pres. York—I have just been looking over the questions, and have a lot of good ones. We will begin with an easy one. Listen to this:

"WHICH IS THE BEST HONEY?"

Dr. Miller—Bees' honey!

Sec. Moore—That question I am asked every day, and my answer uniformly is this: It is the honey that you like the best, that you are used to, and that is in California one kind, in Ohio one kind, and in Cuba another, and go on and give them the names of honey in those localities. You may think this is a very unimportant matter, but it isn't. It is clearly a case of what we are used to. There is no best honey. For the candy-maker one kind, for the cake-baker another kind, for the detective another kind, and the tailor another kind. I should say alfalfa. Take a vote.

Pres. York—How many think basswood the best? One.
Pres. York—Those who think white clover the best raise your hands? Eight.

Pres. York—How many think alfalfa is the best? Three.

Pres. York—How many think sweet clover is the best honey? Twelve.

Pres. York—How many think buckwheat is the best honey?

M. M. Baldridge—Buckwheat is the best honey for some.

Pres. York—How many think the California sage is the best honey? One.

Pres. York—How many think orange-blossom honey is the best? Two.

(Voice from audience)—Best there, but there isn't much of it.

Pres. York—How many know what alfalfa honey is, and have tasted it? Thirteen.

J. A. Green—You didn't hit my case. Sweet clover with fall flowers. I find that everybody who has tried it prefers a small amount of aster with sweet clover.

A Member—Just my experience; same crop and same experience.

Mr. Blunk—It suits this Hawkeye best, too.

Dr. Miller—I think there are two things in the case. In the first place there is, as the secretary has suggested, the prejudice of familiarity; and, then, you will see in the foreign journals, or in journals here, some one comes out and says, This is the best honey in the world. He honestly believes so. That's what he is accustomed to; that's what he likes. There are mixtures, sometimes, that are better than the pure article, and that sometimes makes confusion about it. Sweet clover was spoken of a while ago, and if there was any one honey that seemed to be spoken of enthusiastically it was sweet clover. I am not sure I know just exactly what the best sweet clover honey is, but I have had some and I have used a good deal of it, and had some I got for the pure article. If it was correct, then I don't like sweet clover. I have gotten what I supposed to be, and had good reason to believe was, a mixture of sweet clover with white clover. I think if I should say what honey I liked best of any I had ever sampled in my life, it would be the white clover flavored with sweet clover. The sweet clover alone, to me, has a disagreeable flavor and seems to me a little like this: You take the flavoring of vanilla and nearly every one likes it; but you overdose it, and put too much in your ice-cream—and it seems to me it is a little the same way with sweet clover. It has too strong a flavor, and there will be some that like it. I know people that like the taste of tobacco. The majority of people, I think, would say that the pure article of sweet clover isn't so good as if you have just enough of the flavor, and then it is a fine article. If you will allow the comparison, for two or three years I ate it without knowing what it was, and I called it vanilla flavor, and I think it was sweet clover.

Pres. York—There may be some in the room who are not bee-keepers, who misunderstand Dr. Miller when he said he believed that a mixture might be better than the pure article. He doesn't mean adulterated with glucose or syrup.

Dr. Miller—Not in the same way I would say pure Durham stock.

Chas. Clarke—As regards sweet clover honey, when it is properly ripened it loses all that taste that the Doctor speaks about. I think we will have some here this evening, possibly, in which you cannot find any of that taste, and I think it is a good deal the fault of the apiarist in taking the sweet clover honey right from the super, packing it and sending it to market. It has the taste you speak of, and it loses it when it has ripened thoroughly for six weeks. Sweet clover honey then will hold every customer it goes to, in place of white or alfalfa, or any basswood or other honey; but there are so few that seem to care about the reputation of sweet clover honey, and ship it right to market and get rid of it, the quicker the better. I never have lost a sweet clover honey customer. I never sell any comb honey until it has been thoroughly ripened, for six weeks or three months, and when you go into a room with three or four thousand pounds taken right off from the hives, I can't describe the smell, and in two or three weeks it will lose that and get the beautiful aroma of honey; but I think the alfalfa is really the cause of having so much trouble with adulterated honey on account of its very light flavor.

Dr. Miller—It is only fair to sweet clover for me to say, that in the samples I have tasted and eaten—and I have done it quite largely—that the taste seemed to me just as has been described—that it was raw, and not fully ripened, and it may be that I have not eaten any thoroughly ripened, extracted sweet clover honey, and if any one could give me a sample I would be very glad to sample some that was thoroughly ripened.

Pres. York—Send Dr. Miller a five-gallon can of it, prepaid!

Mr. Riker—I visited in Colorado this fall, in some sections where they raise sweet clover altogether, other sections alfalfa, and in others the two kinds mixed. Where they raise sweet clover people don't like it. Where it is pure sweet clover they can't eat it. It sickens them. They can eat a mess, but can eat very little of it. Of the alfalfa and the other there is no end to their eating it. The more they eat the more they want of it. That experience I found there. Since I have returned I have put extracted alfalfa honey on the market and am selling it to my neighbors. Every person that I have sold it to likes it. They can eat of that when they cannot eat of any other honey. Well, it seems to me that the alfalfa honey really is the best honey I ever had anything to do with. White clover comes next, but the pure sweet clover in the West, where I was this fall, and they told me it was pure sweet clover which smelled exactly as pollen smells, as they grew it, is pure honey there. The gentleman who has sweet clover honey must have some other honey mixed with it in order to make it good honey.

Mr. Clarke—That reminds me of the boy and the cake. You give him a very nice-flavored cake, and give him bread afterwards, and the bread doesn't go good; he likes the cake. My experience has been this: Where I have had a sweet clover customer you can't get him away with alfalfa. He is used to good-flavored honey, where sweet clover is properly ripened—I (I am not talking about "green goods," taking off all the honey and selling it). You give him alfalfa and he will probably tell you that he had a lot of artificial honey. I meet with that everywhere, nine times out of ten, on account of the mild flavor of alfalfa, and the strong flavor of the clover. I don't say anything against alfalfa, because it is a beautiful honey, but it is the change from the strong to the mild which is the cause of the trouble.

Mr. Whitney—I would like to endorse what Mr. Clarke has said with reference to sweet clover. Of course, we have in our locality a sprinkling of white clover but not to any extent—largely sweet clover. I have never proved it finer honey in my life than I have this year, and it is nearly all sweet clover, but, as he says, it should be ripened. Mine was two months in a very warm room and I sold it all, most of it at 15 cents, and I haven't had a word of complaint. There was very little of that strong, sweet clover taste that we get in the smell as we go through a patch of sweet clover. I am inclined to think, however, as the secretary proposed, that the honey that is the best is that which people like best; and I like sweet clover.

(Continued next week.)

Contributed Articles.

Transferring Bees—When and How To Do It.

BY G. M. DOOLITTLE.

A correspondent writes thus: "When is the best time to transfer bees? I have quite a number of colonies in box-hives which I wish to transfer, and I should like to know when this can be done to the best advantage. Can I do it as soon as spring opens? or would I better wait till the bees are securing honey from the fields? or wait till swarming-time? I should be pleased to have your answer through the American Bee Journal."

The transferring of bees from box-hives, or "gums," or from one style of frame hive to another, can be successfully done at any time of the year when bees can fly, if the operator understands just what is needed in the case; and it is with pride that I look on the man or woman who has ability enough to accomplish anything successfully which is necessary to do at a certain time, no matter whether such time is the most propitious or the most unpropitious. The person who can successfully transfer a colony of bees in early spring, when robber-bees are prowling around, is to be admired; yet, unless there is some urgent reason why a certain thing should be done at a certain time, it is always best to wait about doing anything till the time when everything is the most conducive toward a successful outcome.

□ As I consider it, there are two seasons of the year when bees can be transferred to the best advantage, the first being fruit-bloom, and the other 21 days after a prime swarm has

issued. During the first part of fruit-bloom the scramble after new honey is such that one is not liable to be annoyed by robber-bees, and at this time there is very little honey in the combs to cut through; such honey making a sticky mess of everything used during the operation. Again, as the bees are getting their first honey, they are eager for something to do inside the hive at night, hence will repair all mutilation of the comb, fasten the same in the frames, etc., much more rapidly and readily than at any other time.

With all the above being true, fruit-bloom brings the most auspicious time for transferring bees; but it has this drawback: As a rule, the bees have got under good headway rearing brood, and we shall find the combs half or two-thirds filled with the same, so that in cutting them to fit the frames, much brood must be sacrificed, as well as displaced in the brood-nest, owing to our not being able to secure all in the shape in the new hive which it was in the old one. All of this has a tendency toward a loss of bees, and as all of the brood that is sacrificed at this time would become bees of the right age to do the best labor in the honey-harvest, had we left the transferring till later on, we can see that a loss must be made by doing our transferring at this time of the year, with all colonies except those which have little brood in their combs. For this reason I prefer to wait till 21 days after the prime swarm went out. However, even though some brood is lost, fruit-bloom is a much better time to do our transferring than any other except 21 days after swarming, and many think that through transferring in fruit-bloom, the bees are incited to enough greater activity to make good all loss that comes through destroying so much brood by cutting through it.

At the time of 21 days after the prime swarm has issued, all of the brood will have emerged from their cells, except perhaps a few drones, and the young queen will have only just begun laying, or have laid only a few days at most—not long enough so there will be much but eggs in the combs—so that all we have in our way at this time is the honey which the combs may contain, which will not be a great amount if the colony has been at work in the sections; for as soon as the young queen begins to lay the honey is quite generally hustled out of the brood-combs, up into the sections, to give room for the eggs necessary to yield the bees for the future prosperity of the colony later on in the season. And as this comes at a time of the year when bees are generally securing all the honey they want, and the weather is always warm, so that there is no danger of brood or bees becoming chilled, no matter how slow we may work or where we are, we can now do our work right in the bee-yard, this being much more convenient and giving a better prospect of success all around.

So far, I have been looking at the matter from the standpoint of the old way of transferring, as it is styled. If we should desire to use the Heddon or modern plan of transferring, by driving out the bees and hiving them in a hive filled with comb foundation, this is just the time, and the only time in which it can be done successfully, for the combs are free from brood, so only one operation is needed. Otherwise we must first drive out a swarm and hive it in a hive whose frames are filled with foundation, taking our chances of getting out the right proportion of bees, and leaving the right proportion in, and then wait 21 days till the bees have all emerged from the cells, at which time there will very likely be a honey-dearth on, so we will be troubled with robber-bees, while the young queen, in this case, will have already begun to lay.

When using the Heddon plan we do not have to fit any combs into the frames, but the old combs are cut out full size from the old hive, and when we so work, at the time above advised, there will be no brood in the combs to hinder, and nothing to prevent our taking the old hive right to the solar wax-extractor and doing the work right beside it, so that in an hour or two we can have both the honey and the wax from the old hive in shape to use, thus saving time and delay which would result at any other time of the year.

Onondaga Co., N. Y.



Winter Bottom-Board for Outdoor Wintering of Bees

BY H. DUPRET.

Fig. 1 is the winter bottom-board, with the movable parts shown separately. *a* is a 3½ inches thick combination bottom-board made of three layers nailed together; the middle one *x*, being 1½ inches thick, in order to provide a 1½ inch space under *b*, the bottom-board proper (as in Fig. 2). Length and width to suit the hive which is to rest on *R*, *R*, *R*.

b is the movable bottom-board proper. When in place, it will rest on 2½ inch blocks *l*, *l*, nailed to the floor *F*, in the rear; and in front, on another longer movable block *k*. Two or three holes in *b* serve as entrance-holes under the frames.

I usually leave only one open at a time. In preparing this movable board *b*, provision must be made against warping, by nailing cleats to both ends; an allowance of about $\frac{1}{4}$ inch must also be made in the width of *b* (as in *R*, Fig. 2); otherwise dampness in the spring-time will so extend the width that the boards will no longer be movable. Meanwhile the gap is closed by a thin board *c*, placed under and resting in front

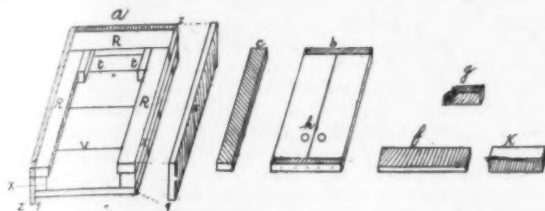


FIG. 1.—Winter Bottom-Board for Outdoor Wintering of Bees.

on a little block *d* (as in Fig. 2); a little roll of paper closes the hole which remains in front.

f is a thin board used as a sort of bridge over the front of the bottom-board *b* between the holes in the front end, to prevent sawdust or any other filling material from falling in *V*. It is not necessary to have it nailed. (See it in position Figs. 2 and 3).

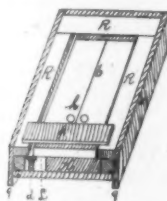


FIG. 2.—Ready for use.

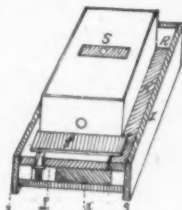


FIG. 3.—With hive set upon it.

k is the oblong block to reduce the width of the front entrance to suit the taste.

Z, Z, Z, are three thin boards to cover the sides of the combination boards; they must be of such width and so nailed as to provide a space under the whole apparatus, as at *g*.

I generally slip a piece of coarse paper over the inside floor *V* for convenience. Bees, in cleaning the hive, when the temperature allows it, drop the dead bees, etc., in *h*, over this paper, and it is easy for the bee-keeper to remove these dead bees by drawing the paper out, and replacing it, if it has become soiled. But late in February or March some colonies

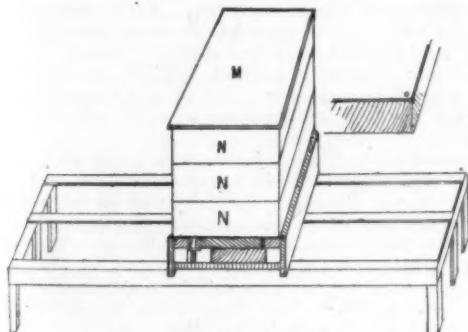


FIG. 4.—With Winter-Case.

will have accumulated dead bees over the movable bottom-board, under the cluster, to such an amount that it will be well to draw this bottom-board out; clean it and replace it inverted, which operation can be performed without arousing the bees much. This is the principal advantage of such a movable bottom-board. The others are: The entrance-holes *h* are never plugged by ice or dead bees; the severe winds never blow directly on these holes; neither do the rays of the sun strike on them.

Care must be taken not to make any of the movable parts (*b, g, k*), too tight, for easy removing of them; for dampness causes them to swell a good deal. So these blocks (*g, k*) should be a little less than $1\frac{1}{4}$ inches thick.

g is used partly to sustain the movable bottom-board in front (inside), and is also placed near the holes *h* to provide a sort of ladder for the bees to climb up and down.

If robbers are troublesome in April or May, a strip of perforated zinc can be used in the front entrance.

Fig. 2 shows the whole bottom-board ready for the hive to be placed upon it. Although it might be used that way all the year around, I exchange it for the ordinary bottom-board some time in May, when I also remove the winter-cases.

Fig. 3 shows the hive in position. It does not lean on the movable bottom-board, but on the three sides of the upper layer, *R, R, R*.

s is my own "Hill's device," provided with an auger-hole—very handy for spring feeding. I generally use a chimney feeder, covered with glass.

Fig. 4 shows the whole winter arrangement.

n, n, n, are the separate parts of the winter case; *m* is the

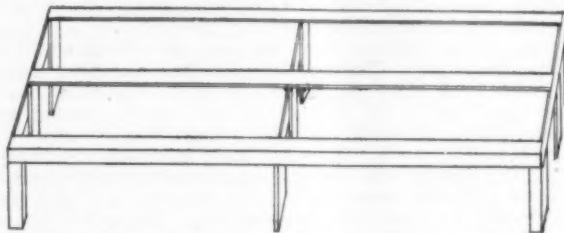


FIG. 5.—Hive-Stand (to accommodate 3 hives with winter-cases.)

This stand serves 3 purposes: 1. Convenience in handling frames 2. Keeping away rats and mice. 3. Protects against snow embankments.

zinc-board cover. The edges in each part of the case (also in *Z*, Fig. 1) are beveled so as to shed rain-water as in *o*, Fig. 4.

I use sawdust as most convenient for a filling-material; about 4 inches thick on the four sides, and as much as 7 or 8 inches on the top of the frames.

Fig. 5 is the hive-stand, all the year around.

Quebec, Canada.

An Experience in Wintering Bees in the Cellar.

BY C. DAVENPORT.

A year ago this winter I wintered about 150 colonies of bees in a basement or cellar that was only partly under ground, and besides the disadvantage of being only partly under ground it was so small that the hives had to be packed very close together and tiered up from the floor to the ceiling. There was no means of ventilation except by the door and two small windows. The temperature varied greatly during some severely cold weather; with both windows closed it would be as low as 38 degrees, and when it was mild, with both windows open at night, it would rise to 60 degrees. Toward spring, when the weather began to get warm, the temperature was even higher, and the bees became very restless and uneasy. They were clustered all over the front of the hives, and if the outside door was left open enough so there was light enough to see, the air inside would be literally thick with flying bees, and the results were about as bad as though a lantern was taken inside.

It became a serious problem how to get the bees on the summer stands. As soon as a hive was set out-of-doors all the bees clustered on the outside would take wing, and those inside would begin to pour out by the hundred as soon as the light struck the hive. I tried setting the hives on a large canvas, then wrapping this quickly around and over the whole hive before many bees could escape, but by the time the hive was carried to its stand most of the bees were out of the hive and in the folds of the canvas or cloth, and when this was removed there would be a cloud, in fact, practically all the bees that were not crushed in the fold of the cloth would be in the air without taking bearings or knowing where they belonged. Smoke only made the matter worse, that is, trying to smoke a colony after it was removed from the cellar. I came very near smoking the whole number in the cellar, but hardly dared to, for I was afraid if the whole air of the cellar was heavily charged with smoke that it might make the matter worse.

These first attempts at putting them out was during a few warm days the first part of March; the weather for a short time after turned colder, but the bees were becoming more restless and uneasy all the time, many colonies beginning to spot their hives badly. I would leave the

windows open and the temperature would go down to 40 degrees or so, but during the day the windows had to be closed to exclude the light, and the temperature would run up to 60 and 65 degrees even when it was quite cool outside.

Of course, with a larger cellar, or a less number of colonies in the same one, there would not have been such a variation in the temperature, even if it was partly above ground.

Another thing that was very unfavorable was that owing to the hives being crowded so close, I was unable to remove the great mass of dead and decaying bees that accumulated.

The colonies in the fall were very strong, and the loss of individual bees was from the first very heavy, so those of experience know what these conditions imply.

As soon as it became apparent that these bees could not be removed to their stands during the daytime, without great loss, I had been thinking about trying to take them out at night, but I had never had any experience in putting bees out at night, and could find but very little in regard to the matter in any books or journals I have, and this is the reason I am giving my experience in regard to the matter.

I have described how restless and uneasy the bees were, and I will say here, before beginning extracts from my diary, that if the temperature at night was not above 35 the bees made no effort whatever to fly when put out of doors even if it was quite light. When a hive was first put out the bees would set up a great roaring, but this gradually subsided, and what bees were clustered on the outside of the hive soon crawled in.

My plan was to put outside, near the door, as many hives as I intended to remove that night, and in one-half to an hour and a half, depending upon the temperature, the bees would be so quiet that the hives could be removed to the yard, a number of rods distant, on a wheelbarrow, without closing the hives. Here are some of the records:

March 18—Carried out 25 hives this evening; temperature 28 above zero.

March 19—It snowed all day; temperature up to 38 at noon. Many bees flew out and were lost in the soft snow.

March 20—Snowed and blowed all day. Temperature 16 above zero; many bees came out of the hives and died in the soft snow.

March 21—Temperature up to 44 to-day. The bees flew quite freely, but many were lost in the snow.

March 22—Temperature up to 46. Cold north wind; bees flew considerable, but many were chilled and lost; snow is about gone.

March 23—Temperature up to 60 in the shade. Bees had a good flight. Tried to remove some from the cellar during the day, but gave it up; carried out 50 colonies this evening.

March 24—Rainy; cold, raw wind. Temperature up to 43 at noon. Thousands of bees from each hive carried out last night flew and were chilled to death. Many, or perhaps nearly all that flew or crawled out of the hives, had bloated, distended abdomens filled with pieces that they seemed unable to void; whether this would have been the case if they had been put out on a warm day I am unable to say, but my opinion is that a large part of them that died to-day would have died just the same, only farther away from the hives, if the day had been ever so warm. One thing certain, they cannot stand such daily mortality very long, or they will all have perished.

March 25—Another rainy, cloudy day. Temperature was up to 46 for awhile. The bees from 50 hives carried out last flew freely, and I think there is no doubt but what great numbers, perhaps thousands, from each hive were chilled and lost that would not have been had the day been warmer. I fear a few more days as unfavorable as yesterday and to-day will cause the loss of the whole 50 colonies. I shall let them remain out now whatever the weather and outcome are. It would be hard to imagine two more unfavorable than yesterday and to-day were; if it had been a little colder the bees would not have left the hives so freely. On the other hand, if it had been a little warmer, or even at the same temperature, if the sun had shone they would not have been chilled.

The bees in the 35 hives carried out first have not attempted to fly since the 23d. I think they will be all right unless the spring should prove very unfavorable.

March 26—Cloudy and colder; no bees flew to-day. The ground is freezing to-night and it looks like snow.

March 27—Clouds and sunshine to-day, with cold wind

from the north. Temperature up to 42 for awhile during the middle of the day. Many more bees from the 50 hives, carried out last, flew and were chilled to death in the cold wind. The bees from the other hives did not fly.

March 28—Clear to-day; temperature up to 40 for awhile; cold wind. Thousands of bees from the hives carried out last flew, and many were chilled to death. The rest of the bees in the basement are getting very uneasy. Great numbers are leaving the hives and dying daily.

March 29—Fair most of the day; temperature 42 for a short time; cold wind from the east. Large loss of bees again from the 50 hives carried out last. It is evident that these bees are dying for want of a flight, but the condition they are in, a flight means death during such weather as there has been since they were put out. It must be there is considerable hatching brood in those hives or they would, after suffering such great losses daily, be weaker than they appear to be. This evening they all, with few exceptions, responded quite strong and brisk to "taps" on their hives. Three are about gone and another one is very weak. I think most of the rest would pull through if they could have a good flight soon.

March 30—Snowed some last night and this forenoon. Temperature 26 above zero; no bees left the hives.

March 31—Temperature up to 49 for awhile; no wind. The bees in all the hives out-of-doors flew freely. Considerable loss of bees again. Carried the rest of the bees out of the basement this evening.

April 1—Fair; still ... temperature up to 55 in the shade.

I will not quote from the diary any farther just now. The spring turned out to be fairly favorable; the loss among this lot of bees was much less than I expected it would be. There was no colony that died outright. A few colonies spring-dwindled, 3 or 4 lost their queens during the winter or early in the spring, before they had commenced to lay, and a few colonies deserted their hives soon after they were put out.

As I surmised, almost all of these colonies had commenced to rear brood in the cellar; many of them had an amount nearly equal to a whole frame of hatching brood, and it was this early-started brood-rearing that saved them. The old bees died off very rapidly after they were put out. The majority of the colonies got down pretty weak, but they built up fast.

If the spring had been late and cold the loss from spring dwindling would undoubtedly have been great. There were 148 colonies put into this basement in the fall, and by referring to my record-book I find that there were 119 colonies in this yard the first of May recorded as strong to medium, and 4 weak ones. As I said in the first part of this article, the colonies were all very strong in bees in the fall. There was a late fall flow so that brood-rearing was kept up late, and they had plenty of good, sealed stores, but there was another matter that might be expected to be against favorable wintering even in a good cellar; perhaps I can best explain by quoting a brief extract from my diary again:

Dec. 16—Finished putting the bees in to-day; they have not had a flight since the fore part of November; left them all out in hopes that they would have another flight, but there was no day warm enough. There were no very bad storms or severe cold; a few nights it was down to zero or a little below.

The rule is to put bees in within a day or so after they have had a good flight, but these were out in the yard for 5 weeks or more after their last flight.

Considering the cellar they were to be wintered in, they were perhaps as well off in the yard as they would have been inside, as long as the weather was not very severe.

Before closing I will speak of a matter in regard to cellar-wintering upon which my opinion has been asked. Two years ago, I think it was, Mr. Barber, in one of our bee-papers, claimed that no fresh air should be admitted to the cellar when the bees became so warm that they were uneasy, but instead the cellar should be banked and fastened up still closer towards spring, or during a warm spell, so as to exclude all fresh air from entering. He claims fresh air does harm because it arouses and excites the bees. Dr. Miller and others advise letting in fresh, cool air at night, when the cellar becomes so warm that the bees are restless and uneasy. Both Dr. Miller and Mr. Barber are veterans whose opinions are entitled to great respect, and in this matter my experience has been such that in a way I agree with both of them. I believe the

quieter bees are kept, or remain during the time they are in the cellar, the better, and fresh air admitted by means of an open door or window certainly arouses and excites them. In some cases this fresh air causes a great roar of excitement and I believe it does harm.

There is a saying in regard to drugs, to the effect that their use is always a great evil, but that their use is sometimes necessary in order to overcome evil. Now I believe that this fresh air does harm by exciting the bees, but I know much greater harm would result in some cases if it was not admitted. In the case I have been describing I do not believe a dozen colonies would have survived if the windows had remained closed from the time the bees were put in until the weather was warm enough to put them out in the spring. I have always been an advocate of plenty of fresh air for cellar-wintered bees, but I believe it is much better to admit it through a room or ventilator, in some way gradually, so as not to excite the bees. Southern Minnesota.

* The Afterthought. *

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

HIVE-COVERS AND ANTS.

Another way to have the double cover free from ants would be to have the two edges entirely open. Then, if it was thought worth the fuss and fragments involved, they might be closed for winter with strips of wood—to be pulled off in the spring. Page 132.

THAT ADVICE TO BEGINNERS.

Beginner's advice for those who ought not to begin, eh? That's all right, Mr. Morehouse; yet, like the famous and brief advice to those about to marry, it may not be heeded. When the passion and the fever burn at their highest, a mountain pitched right in the path would be only a pebble under the wheels. Page 133.

SWARMING.

Mrs. Barber's remark that during an epidemic of swarm-fever more than half the young queens disappeared before beginning to lay, is an important corner of an important subject. Workers feel murderously hateful because their desires are continually thwarted—is my guess about it—and if correct, how are we going to help ourselves except by letting them have their own way? A modified guess might be that bees at such times are excitedly meddlesome, and too easily convinced that somebody needs killing.

I think abundant pollen-supply and steady honey-flow—not quite heavy enough for much surplus—to be two of the most important provocatives to swarm-fever. Bad wintering the winter before stands about third, perchance. Hot weather, frequent showers, small hives, and frequent manipulation—especially persecution to kill their drone-brood—are also provocative, I think. Mr. Hawley's remark that during a heavy honey-flow two apiaries under the same management behave differently about this matter of swarming—well, it makes one scratch his head and say: "There it is again." As Mr. Alkin rightly suggests, enthusiasm for honey-storing on the part of the bees is the grand remedy; and this must begin before the fever gets started. Unfortunately, that's what we can't possibly secure when by reason of dearth it is lacking. Page 135.

THE DEMAND FOR EXTRACTED HONEY.

Wonder if A. F. Foster is a prophet where he says the use of extracted honey is going to decline relatively. Doubtless would if certain evils are to continue forever. But let us brace up and say, "The Kingdom of Glory is coming"—and then pitch into the evils as often as we can. My customers are decidedly increasing the proportion of extracted which they take. Page 135.

MATING QUEENS IN CONFINEMENT.

Mr. Flower, you are rough on the editors, to complain of the small space devoted to mating in confinement. How can they devote space to it until competent brethren try the thing some more, and report? It seemed last spring that we should have something new in that line; but the season passed, and it now looks as if nobody actually got at it. Page 137.

LONG-TONGUED BEES AND WOMEN.

And Mr. Flower is a little rough on the long-tongued bee, also. The long-tongued woman *does*, more frequently than the ordinary woman, make a wonderful housekeeper—keeps the dirt out, keeps the flies out, keeps the boys out, keeps the traveling agents out ("Diamond cut diamond;" and "Two of a trade;") keeps the owner of the house out, when he might be wasting time in an easy chair; and keeps superfluous company out, that might be wasting the time and resources. Page 137.

WINTERING A NUCLEUS IN AN OBSERVATION HIVE.

Comrade Chrysostom certainly did a unique thing when he wintered out-of-doors (Northern Indiana) a three-frame nucleus in an observation hive. The three frames, if I understand aright, were one above the other; and the only space the bees had to cluster in were between the one comb and the outside glass. Possibly glass has a value as a winter wall which we have not exploited yet. Page 142.

CAN BEES HEAR?

If we are to take at full face value the account on page 142 and 143, it seems to be the long-looked-for, and always-provokingly-lacking, positive proof that bees can hear. If they can be taught by long feeding—and patient whistling of a particular tune always while feeding—to leave the hive and fly several rods at the sound of the whistle, what more can be asked? But there must be no "gammon"—no intentional or accidental timing of the sound with some other thumping or display or perfume which actually calls the bees. And it must not be always at exactly the same time of day. On the wind side a smell too slight to be noticed by people would probably be sufficient. Possibly the perspiration smell of their keeper standing there would be enough, especially if they had been drilled to that by licking honey off his hands. I, too, think bees hear; but when we get the positive evidence let it really be positive. That they are often non-responsive to sounds fails to prove they lack hearing. They are just as often amazingly non-responsive to the sense of sight; but that does not prove they cannot see.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Keeping Combs of Honey for Swarms.

I lost 4 colonies of bees out of 26 this winter. The combs in the 4 hives are as bright as ever and $\frac{3}{4}$ full of nice sealed honey. How can I keep these combs and honey for swarms next season and prevent wax-moths from destroying it then, using a disinfectant which will not cause the bees to leave the hive in which I shall put a swarm on these combs? What should I use, and how? OHIO.

ANSWER.—Use bisulphide of carbon. Set a saucer or other dish over the frames, pour into it one or two teaspoonfuls of bisulphide of carbon, then cover up as nearly airtight as you can, having no leaks at top or bottom; pile them up in a pile and treat the whole at once, putting the drug on top of the pile, and using a fourth of a pint for the four. You may as well leave the pile covered up till the next day. Then if you keep the combs where the moths will not get at them, they will be all right till you are ready to put swarms in them. Look out! though. Bisulphide of carbon is highly explosive, and if you bring a light near it there may be trouble.

Transferring Bees from One Size Frame to Another.

I have a colony in an old hive which I desire to transfer to a dovetailed hive, but I do not want the mess of cutting out the comb from the frames and fitting them to the Hoffman frames. Would it be a good plan to put full sheets of foundation in the frames of the new hive and place the old one on top some time in May, with the queen in the lower hive

and an excluder between the two? Would the bees take care of the brood in the upper hive until hatched?

My idea is to have the old frames cleaned out by the bees without losing the brood; then if the combs are in good condition I can fit them in the Hoffman frames. The old frames are about 10x15 inches. NEW YORK.

ANSWER.—Your plan will work all right, except that it will plunge you still deeper into the mess you want to avoid; for the old combs above the excluder will become filled with honey. If you can extract that, you will be all right.

Specialist Bee-Keepers—Rearing Queens, Etc.

1. About what percent of the successful bee-keepers of the United States make bee-keeping their only occupation?

2. "Honor bright," do you think as good queens can be produced from a queen-mother that is confined in a nucleus (to prolong life) as from the same queen when kept in a full or normal colony?

3. Do young bees which hatch too late in fall to get a cleansing flight live until spring? MASSACHUSETTS.

ANSWERS.—1. That's a tough one. I haven't data on which to base an answer, and it would probably be very difficult to obtain such data. In the first place, I don't know what proportion are "successful bee-keepers," and I don't suppose every one would agree upon what should be called a successful beekeeper. Taking bee-keepers as a whole, my guess would be that in most of the States not more than one in 500 makes bee-keeping his only occupation. Take such States as Colorado, and it is possible that the number may rise to 1 in 25 or 50. Yet that guess may be very wild, and I should be very glad if some of the bee-keepers in those regions where specialists are plenty would tell us what percent have no other occupation.

3. "Honor bright," yes. The form of your question suggests that you think differently, and there is a possibility that you may be right. Will you kindly tell us your reasons?

3. I think so.

Bee-Sting Remedy—Dark Color for Hives.

1. Can you give any remedy for the swelling caused by bee-sting, or, rather, an antidote to prevent the swelling? The sting causes little or no annoyance. I hardly notice it, but the swelling is something awful. I have tried ammonia, arnica, soda bicarbonate, Iodine tincture, and hot water. I have been subject to stings for the last 5 or 6 years.

2. What are the objections to hives being a dark color, except being hotter in summer? PENN.

ANSWERS.—1. It almost seems that the only thing is to keep away from bees. Possibly an application of honey or cold water might be good.

2. I do not think of any other objection, unless it be a matter of taste. Unless the sun shines on the hive a dark one would hardly be hotter than a light one.

Spring Feeding—Making Nuclei.

1. About how much sugar syrup will I have to feed my three colonies of bees, that have run short of honey this spring, to last them from now until they can gather honey. I am feeding these three colonies one pound of sugar syrup every day. Is it enough?

2. How can I form nuclei? I am after increase. How many nuclei can I get from one 8-frame colony? NEW YORK.

ANSWERS.—1. That depends. If you have plenty of pasturage from the time of fruit-bloom, it may be well to count that they need something like 10 pounds each from the middle of March. If they gather nothing till white clover they may take five pounds more. That's a liberal allowance, but it's on the safe side.

2. Something depends upon the number of frames filled with brood, for you can make a good nucleus from each two frames. You can make a nucleus for each frame of brood, but you will hardly do it a second time, and it is better not to try it the first time. Suppose there are 6 frames well supplied with brood. Of course there will be two other frames of honey and pollen. Take two frames of brood with adher-

ing bees with one of the frames of honey, and put them in an empty hive, taking the queen with them. Two days later take from the old hive two frames of brood and bees and put in a hive on a new stand. Use the other two frames of brood and bees for another hive. That leaves your old hive with only the one frame of honey. Go to the hive that has the queen, and take from it the frame of honey, and put it along with the queen in the old hive. The object of taking the queen away two days in advance is to be able to form your nuclei from queenless bees, which stay where they are put better than bees that do not feel themselves queenless. If you want to make the matter more sure, you can stop the entrances with green leaves for 24 hours after forming your nuclei. Only you need not close the entrances of the two hives that have had the queen in them.

Feeding Bees in Winter.

Last fall I got a colony of bees from a neighbor, which I have kept in the cellar up to this time (March 12). March 10 I happened to go down into the cellar, and took a look at the hive. What I found was a quart of dead bees. I thought the bees must all be dead, and took the hive up in the sunshine, where I scraped some of the bees from the bottom, when quite a swarm of live bees came out. I then opened the cover and removed one frame, and there seemed to be thousands of bees still alive, even if a quart of bees had died. The frame I removed did not contain any large amount of honey—about 2½ inches square of honey was found in the frame, all the other cells being empty. I decided they must be short of stores, and made a mixture of sugar and water (I dissolved the sugar in the water), which I ran into the cells of the frame I had removed. (I should think there was about ½ quart of sugar syrup.)

In the evening I put the hive back into the cellar again. The next day (March 11) I went down (into the cellar) and examined the hive. I heard the low hum of the bees, but I decided I would see how much of my syrup the bees had eaten, and again took the hive out of the cellar, and put it in the sun. Some of the bees came out and flew about for awhile, and returned to the hive. I removed the same frame that I had filled, and found the bees had eaten all the syrup. I again filled it with syrup. Now what is the best thing to do? What can I do to keep those remaining bees alive till it is time to put the hive out? What else could I have done instead of what I did. MINNESOTA.

ANSWER.—What you have done may work all right. The best thing would be to give them enough comb honey to make them pull through. Likely you have none. Then make candy. The Scholz or Good candy described in your bee-book will be best; but if you have no extracted honey with which to make Scholz candy, make plain sugar candy.

Transferring Bees.

How can I best transfer bees from an old-style box into a modern hive. ILLINOIS.

ANSWER.—The instruction given in your text-book on this subject is all right, only nowadays there is a tendency toward the practice of allowing bees first to swarm, then transferring three weeks after the swarming, when the worker-brood has had time to hatch out.

Transferred Bees Fighting—Having Too Much Honey in Spring—Placing Hives, Etc.

1. Will not the bees fight when you return the old bees that are left, to the new swarm, 21 days after swarming when transferring?

2. Can bees have too much honey when put out in the spring?

3. Does it make any difference how far apart the hives are placed?

4. About how many dead bees should there be on the cellar-floor from 23 colonies if they are wintering all right?

5. Is the north slope of a hill a good place for a bee-cellar? Wouldn't sand, put on the floor about 4 inches thick, and then sawdust 2 inches thick on top of the sand, help to keep the cellar dry? IOWA.

ANSWERS.—1. That will nearly always be at a time when the bees have good pasturage and will be peaceably inclined. The drumming will take all the fight out of the bees from

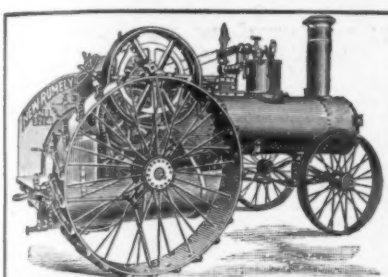
the old hive, and a good smoking will in nearly all cases take the fight out of the others.

2. It would probably be an impossibility in most places. They can not go into winter quarters with more honey than to have all their combs filled. In the course of the winter they will eat out enough so as to afford the queen a place to begin laying, and the enormous draft made on their stores to keep up brood-rearing would empty out enough more to allow all the room needed up to the time of harvest. If, however, the locality is such that from the time they were taken out there would be enough honey gathered to make good the amount used each day, then the queen would become crowded for room. If you find in your part of Iowa a place where the queen becomes crowded for room to lay in a colony to which you have fed nothing after putting in winter quarters, be sure to report it.

3. Yes, indeed. If you put them too far apart it makes too much travel when working at them. If too near each other you will not have room to work at them, and there will be danger of queens and bees getting into the wrong hives. If you leave room enough so that you can be comfortably seated between them, it will be about as well as to put them farther apart; and you can just as well put them in pairs, putting the two hives of a pair as close as you can without touching, then have space enough to put a seat between that pair and the next pair.

4. The number varies. With equally good wintering, the number of dead bees will be much more in a colony that has a large proportion of old bees. There may also be the same number of dead bees with none on the floor in one case and many in others, for in one case they may all be on the floor of the hive and not on the cellar floor. The time they are taken out also makes a great difference. In the past winter, no more bees died for me in the first 75 days than in the last 5. If not more than a quart die for each colony, you may be pretty well satisfied.

5. Other conditions being all right, it would be a good place, but probably no better than any other slope. If the sand and sawdust were very dry when put in, it would make some difference about the dryness of the cellar. But dryness is not so important as temperature and ventilation.



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After reading Mr. Davenport's minute detail of no-drip shipping-cases, it seems all comb-honey producers should be told a much better and more modern plan of fastening strips in no-drip cases. Mr. Davenport was told of the troubles, and cut off his hammer handle, not thinking that the nails were objectionable in any way but in the probable incident of putting them in. While the fact is that anything less thick than honey could find its way under and through the nail holes very readily. Of course everyone is supposed to have nails, etc., but such is not always the case; and, further, not many men are able to hold a small nail in their great fingers and drive it even with a short-handled hammer. We do many small things, and know how difficult they are to do.

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have a hole in it or a handle to lift it out of the case. The board or form I use has a knot-hole about 3 inches from the end which serves the purpose, the hole or handle should be near one end, or the paper will come up with it from the air-suction. Several one-inch holes through the form would facilitate its quick removal. In rapid work a little paste spread in places on the bottom of the crate would help hold the paper in place. We depend on the wide ends of the paper to hold on to the end of the case firmly; while the form at one end is lifted by the fingers, holding the paper against the case.

Referring to the nails again, you will now see that ordinary flour-paste, rather thick, put on the under side of the strips will hold them in place—no nails, no short-handled hammer, no nail-holes in the tray; in short, a no-drip case used by no one but Bingham and Hetherington that I know of. There is no patent on it, yet it is a vast improvement on any other I am acquainted with.

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Do Bees Hear?

This seems to be a very puzzling question among the entire bee-fraternity, even among the most learned and experienced. It has always been settled in my mind even from a small boy, that bees do hear.

There was a circumstance that occurred when I was a boy 8 or 10 years old that so fixed the belief that it will take strong arguments and even "showing" to change my ideas in that line.

That circumstance was like this: My father and a neighbor went to a sale, and each of them bought a colony of bees. This was something new for the boys concerned about the bees. In those days the highest degree of success was marked by the number of swarms any one had. Of course we watched to see who would get the first swarm, as the time of swarming came on. "One Sunday morning the alarm was sounded that the neighbors' bees were swarming, and we all started for the scene, and as we gathered near the place the hiving of the swarm soon began, but they were rather stubborn about being hived, or the neighbor did not understand how to handle them as he should, for all at once they rose up in the air and commenced to start for the woods, when the neighbor began whistling, and they all at once turned and came back just as suddenly as they started away, and settled on the same tree under which the neighbor stood.

Now I want to say here that most of the colony had broken the circle so common to swarming and started in a course some 4 or 5 rods away.

In the summer of 1900 I had a swarm issue and was standing in the air, as if they were lost or bewildered, but in a few minutes they started off in one direction, and I started with them for about a block until I was under them. I then commenced to

would have alighted on my head had not I stepped among some small peach-trees near by, upon which they settled.

Then, again, when all the bees are in the hive save 1 or 2, and you in some way pinch one, how soon a number will come rushing to its help, in answer to its loud call for assistance.

I would also ask, Why does a queen pipe if she cannot be heard by the colony?

With these facts staring me in the face, I must believe that bees do hear.

H. W. HECHLER.

Keokuk Co., Iowa, March 4.

Experience with Bees.

The fall of 1900 found me with 4 colonies, heavy in stores and bees, and for the season 24 sections of honey, several stings, and some experience. Winter problems confronted me. My neighbors were ready to advise me as to the wherewithals, etc. I was told that bees froze stiff and remained in a dormant state until spring, and, when they thawed out, to feed them corn-bread and molasses. Another bee-keeper who had gone out of business, for lack of stock, said to kill a chicken and bake it and put it in the hive for the bees. I wanted to do the right thing for the bees, and, like many other beginners, I was inquiring of every fellow that had ever kept bees, what to do with them, and I found them ever ready to advise.

Let me say right here, before I forget it, that about that time I received a sample

copy of the American Bee Journal, and one of the first things I noticed was an editorial in which Editor York cautioned the beginner in regard to taking advice of men that had failed to make bees pay, but advised them to get a standard text-book and subscribe for some good bee-paper. That timely advice was all that saved me going out of the business. I had subscribed for a paper and concluded that I could do without the text-book; that was a big mistake, but I didn't see it then.

I was greatly pleased with the American Bee Journal, but my 24 pounds of honey would hardly stand two bee-papers. (Some people keep bees for pleasure, some for the dollars, but a combination suits me best; I find much pleasure with my bees, and a little money is a right handy thing to have around the house).

I would advise the beginner to take the American Bee Journal, and then if he gets into trouble, all that is necessary is to make his wants known and Dr. Miller will do the rest.

But, in December I bought 7 more colonies, and moved them on a sled over as rough a road as there is in southern Ohio; they bumped around over the rocks, and I expected to lose them all; 4 colonies did die, but the other 3 colonies pulled through in very good shape. The colonies that died were queenless and had laying workers, at least so I supposed, as 1 round drone-brood in worker-comb and no queen present. They left at least 40 pounds of honey in the hives which I fed to the bees in the 6 colonies which remained.

As evidence of my ability as an up-to-date apiarist, increase was the paramount issue with me, when spring came. There being no bees within 3 miles, except about 5 colonies, I fed my bees in the open. I contracted the entrances to 2 inches, and found that proof against robbing—only use the preventive before commencing to feed. I also succeeded by following Doolittle's plan of stimulating and spreading brood.

I produced apple-bloom honey, of which I received for my trouble some 30 pounds per colony, it being the first apple-bloom honey produced in sections in this vicinity. So I concluded it paid to read bee-papers even if I am a 2x4 apiculturist.

Ants bothered my bees badly in early spring, and I tried to "lick them" in a hand-to-hand contest but failed. I tried salt, hot water, coal-oil, and even turpentine; still they came. I then smeared the bottoms with pine tar which did the work. My new hives I fixed by driving four 8-penny nails, one in each corner, like legs, and smeared the nails with tar and let the nails rest on blocks which I also gave a good coat of tar. Shallow cans filled with water and the nails resting in the cans would produce the same effect. If you are troubled with ants just try my simple remedy and note the results.

By stimulating, my bees swarmed 3 weeks sooner than any in the country, and by natural swarming I increased to 15 colonies. Some of the after-swarms were very small, so I concluded I would double up some. I hived an after-swarm on Tuesday, and on Friday I ran another after-swarm into the same hive and again another on Sunday, using a little

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tobacco-smoke each time. Each succeeding day I would find a dead queen near the entrance, but no fighting among the bees. (Davenport is correct again).

Now I went one step further, to build the colonies up very strong. In about a week, after sundown one evening, when the bees were hanging out on the alighting-boards, I picked the boards up very carefully and held at the entrance of my experimental hive; I shook a few of the bees down. The bees came out of the hive and went for them, and some of them were foolish enough to pop it at me. After they had settled down I let the cluster on the board down so the bees would just touch the entrance, and they went right in and were not molested; on the same plan that if the bees are hanging out and fanning and you jar the hive they will quit fanning and go in the hive. I put all the bees from 5 alighting-boards in the same way and then gave them a few puffs of smoke, and awaited results. They filled 10 frames with stores for winter, and I got 24 sections of honey from them.

They appear to be wintering all right. Was it locality? "Tut," I suppose some of you wise sages will say, "It's a lie." I say I can do it again, so can you if you knock some of the scales off your stout-edged glasses, and let up on Davenport long enough to try it.

Pike Co., Ohio, Feb. 21. J. M. WEST.

Loss in Cellar-Wintering.

While in the cellar a short time ago I noticed a bee dragging one of its dead comrades towards the edge of the floor of the hive, and when it got to the edge over went the living bee with the dead one down to the cellar floor. Now I wish to express two opinions right here: First, that was a strong, healthy, vigorous bee, that (barring an accident) would be likely to come through the winter all right and do effective work in the spring. The next is, that bee would never get back into the hive, but perish on the cellar floor. I would like to ask the cellar-wintering fraternity if they have made observations along this line, and if it is shown conclusively that we suffer serious loss in that way, the next move will be to devise a remedy.

Since making the above observations, I have enjoyed a very pleasant call from that prince of bee-keepers, S. T. Pettit, and he agrees with me that we suffer loss as above.

J. M. CRICKSHANK.

Ontario, Canada, Feb. 24.



Queens Hurt in Mail Still Good for Stock.

The editor of the Bee-keepers' Review says:

Queens are often injured in shipment. Of this there is no doubt. One proof is that a very superior queen often turns out to be a very poor queen after a long journey; while daughters of this queen prove to be most excellent. I have often sent out a queen that I knew to be the best that could be secured only to have customers complain; and then, the next year receive a letter of apology, saying that a daughter of this queen had proved superior to anything in the apiary. A queen should be bought, not so much for the work that she may do herself, but for the blood that she brings into the apiary.

Time to Take Bees Out of Winter Quarters.

R. F. Holtermann, in Gleanings in Bee-Culture, advises to begin about March 15. To this Editor Root replies:

It may be well to bear in mind that localities vary greatly as to the proper time to set bees out. Dr. Miller once gave the good rule that applies equally to all places, to set out when the soft maples come into bloom. This

30 DAYS TRIAL

on any vehicle we make. Keep it if you like it, return it if you dislike it. We save you dealer and jobber profits. If you want to know more send for our free 22nd annual catalogue.
KALAMAZOO CARRIAGE & HARNESS MFG. COMPANY.
(Pioneers of the Free Trial Plan.)
Station 23, Kalamazoo, Michigan.



Please mention Bee Journal when writing.

Bee-Man,

Experienced, Wanted, at once, to manage 200 colonies. Wages, \$20 a month and board.

14A1f **W. R. ANSELL, The Portland, St. PAUL, MINN.**

Nucleus Colonies, Queens, Strawberry Plants. American Bee Journal and Tested Queen, \$1.50. Circular free.

14A1f **J. F. MICHAEL, R. R. 6, WINCHESTER, IND.**

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will usually be about the time when safe warm weather comes on. We shall, however, set our bees out late rather than early. We are liable to have a very warm spell in April, during which the bees will get a large amount of brood started. This will be followed by cold weather during which not only a large part of the brood is lost, but many of the bees, in their efforts to cover and preserve the brood. It therefore seems to me (except in the case of actually diseased colonies) that March 15 is about a month too early for most localities. Last year we did not set our cellar bees out till after the 1st of May, and those colonies proved to be the best we had. Of course, if one can't keep his bees quiet he will have to set them out earlier.

A Handy Tool.

"It is a long iron spoon about 15 or 18 inches long. With it we can work our cappings, also in lighting our smoker. A little charcoal from last using in bottom, the spoon can quickly take live coals from the stove to add to, then fill up with—we use dry apple-tree bark."—Australian Bee-Bulletin.

Foul Brood.

Foul brood is not always apparent at a spring examination. A colony that appears free from the disease early in the season, may turn out badly infected in August and September. Don't be lulled into a sense of security because no infected colony is found when supers are put upon the hive.—Bee-Keepers' Review.

Purity of Italian Bees.

"Nor do I consider any Italian queen as pure." When Bro. Doolittle says that, I think that what he means is true, but that what he says is not true unless he uses the word "pure" with some meaning other than that found in the dictionary. From what he has said in other places, I understand him to believe that no Italians are of an entirely fixed or permanent character, in which he is probably strictly correct. But I do not know that in the term "Italian" there is at all involved the idea of strict permanence of character. If a man should order a queen, saying, "I want a tested queen, for I want to be sure that I have nothing but pure Italian," I think Bro. Doolittle would be able to fill the order, and it would not surprise me if at some time he may have sold a queen that the purchaser supposed was "pure Italian." If there is no such a thing as a pure Italian queen, there is an immense amount of correcting that should be done in our bee-literature. In looking over a half-page in the "A B C" I found just nine such corrections needed. Moreover, if no Italian queen ever sold was pure, an immense number of frauds have been committed by men supposed to be honest.—Stray Straw in Gleanings in Bee-Culture.

Exposing Brood to Robber-Bees.


Did you ever notice that bees rob worse when brood is exposed? If you never have, the next time you have the ill luck to have bees waiting to rob, just open a brood-nest and see how quick the robbers pour into it. Bees will rob when brood is exposed when they would pay little attention to honey alone. I suppose that when they smell brood they at once conclude that some colony is in a bad fix, and that it is a good time to make a raid on it.—Lone Star Apiarist.

English Versus American Pluck.

C. H. Tomlinson, in the British Bee Journal, reports that he was driving some bees, and says:

There happened to be staying in the house a bright American girl, and a very inquisitive, excitable and stout old lady (English), both of them desirous of seeing "the fun"! As it was getting late in the day, and the bees were not in the best of tempers, I advised the ladies to don their veils (which the younger did), and then placed them in an advantageous position to view the whole proceedings.

Hardly had I commenced operations, how-



THE GLORY OF HEALTH.

What is more pleasing to the eye than an athletic, clear skinned, deep chested man, ready to toil or play, with the free, easy grace of perfect health? The kind of man that goes singing about his work, because he feels that way.

WATKINS' VEGETABLE ANODYNE LINIMENT

will not make a lazy man muscular, but it will keep the body in such perfect condition that the food you eat, the work you do, will all help to build up a big, strong body. It is the cold in the chest, followed by a troublesome cough that breaks down so many strong bodies. A dose of Watkins' Liniment will stop it all before the harm has been done. **No running for Doctor, no paying big doctor bills.** Use internally or externally for Colds, Coughs, Colic, Diarrhoea, Dysentery, Cholera Morbus, Indigestion, Cuts, Burns, Bruises, for man or beast.


Watkins' Liniment is good for so many diseases because of the large number of valuable ingredients, each of which does its own work, and does not interfere with the others. Let our agent leave a bottle at the house. If there is no agent in your neighborhood, write to us, and we will see that you are supplied.

A Valuable Gift.

We have a beautiful Cook Book and Home Doctor that we send free to all. It is full of valuable recipes and good wholesome advice. Everyone is surprised that we can afford to send out such a complete and beautiful book free. Write today. Send your name and address on a postal card.

THE J. R. WATKINS MEDICAL CO.,

10 Liberty Street, Winona, Minn., U. S. A.



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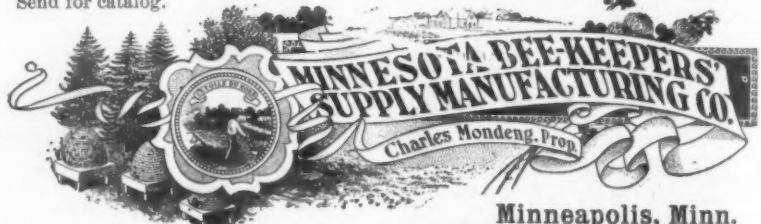
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7A26t

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Send for catalog.



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We have the Best Goods, Lowest Prices, and Best Shipping Facilities

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BEEKEEPERS

Notice

We carry a full line and large stock of the A. I. Root Co. goods, which we sell here at their factory prices. Estimates cheerfully given. Send-to-day for our 16th annual catalog for 1902. Address,

JOS. NYSEWANDER,
710 & 712 W. Grand Avenue,
DES MOINES, - - - IOWA.

BINGHAM'S PATENT
24 years the best.
Send for Circular. **Smokers**
25Atf T. F. BINGHAM, Farwell, Mich.



SHEEP MONEY IS GOOD MONEY if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ill.

Please Mention the Bee Journal when writing Advertisers *****

ever, when I heard a shout, and the exclamation, "Oh, I shall be stung, I know I shall!" from the dame, who at once commenced to throw her arms about in the usual style. Her hostess endeavored to calm her fears, telling her that beating off the bees in that fashion was the very way to get them to sting her; the next instant there was a perfect yell! A bee had pinned her on the face. Without waiting further risk of damage she whipped her skirts up over her head and ran screaming into the house. I would have given almost anything at that moment for a "Kodak" snap shot, the back view being exceedingly fine.

The American girl stood it without any sign of retreating, indeed, seeming both interested and highly amused.

It would be a very unfair inference to conclude that the American girl had any less fear than the other. Indeed, did she not show the greater fear by putting on the veil?

Selling Honey.

In the Progressive Bee-Keeper, S. E. Miller discusses the manner in which a full supply at commission houses brings down the price, and then says:

The question then arises, What is the remedy? My answer is: Withhold as far as possible our honey from the principal market centers, and the way to do this is to dispose of every pound that we can in the smaller cities, towns, villages, and even in the county. I know it is much less trouble to dispose of the entire crop in bulk and be done with it, but by selling in smaller quantities and supplying the demand nearer home, we can realize enough more per pound over what we would receive if shipped to a commission merchant, to pay us well for the time devoted to selling, and the extra cost of smaller packages. One who has never tried selling honey to his home trade and near-by towns does not know how much honey he is shipping off to help keep down prices in general that might just as well be used near home to make new customers and an increased demand.

Tennessee Queens



are a specialty. Discount after July 1st. Send for circular.

JOHN M. DAVIS,
14A26t SPRING HILL, TENN.

1902—Bee-Keepers' Supplies!

We can furnish you with The A. L. Root Co's goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market prices paid for beeswax. Send for our 1902 catalog. M. H. HUNT & SON, Bell Branch, Wayne Co., Mich



Are You a Judge?

"If your experience with sheet metals has all been 'under cover,' you are liable to make a mistake when choosing a rural mail box. Even the box-makers who have had no 'outdoor' experience are astonished at what the cruel weather can do.

We can give you valuable 'pointers' gained by actual experience. Write for particulars.

BOND STEEL POST CO., ADRIAN, MICH.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	\$.75	\$1.40	\$3.25	\$6.00
Sweet Clover (yellow).....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.85	4.25	8.00
White Clover	1.00	1.90	4.50	8.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

FOR SALE

60 colonies of Hybrid Bees, all in Dovetailed Hives, on self-spacing, Hoffman frames. One or 10 colonies, \$3 per colony; 10 or more, \$2.50 per colony. One super goes with each hive. All bees guaranteed to arrive safely by express. Address, **F. GENT, ROCKFORD, MINN.**

14A1t Mention the American Bee Journal.



Page Poultry Fence

weighs 10 pounds to the rod. Isn't that better? **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

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Wanted Comb and Extracted Honey!

State price, kind and quantity.
R. A. BURNETT & CO., 199 S. Water St., CHICAGO
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DAIRYMEN ARE DELIGHTED
to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.
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BEEES FOR SALE

60 good, heavy colonies. Will be sold at a bargain if taken soon. Address,
C. S. JACKSON, HARPER'S FERRY, IOWA.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send \$1.25 to

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FOR HIS
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.

WALTER S. POWDER.
512 MASS. AVE. INDIANAPOLIS, IND.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 19.—There is continued depression in the trade owing to light output on the part of retailers and the desire on the part of those having stock on hand to dispose of it. The past two weeks have noted a further decline in price of comb honey, with the exception of basswood, which is scarce and wanted at 2 to 3 cents above any of the other white grades; it now brings 14@15c; alfalfa and other fair white, 10@13c; ambers, 8@10c. White extracted dull at 5@6½c; ambers, 5½@5¾c; Southern and dark, 5@5½c. Beeswax scarce at 30c.
R. A. BURNETT & CO.

CINCINNATI, March 6.—The market in extracted honey is good with prices lower. Amber, for manufacturing purposes, brings from 5½@6½c; better grades from 7@8c. Fancy comb honey sells at 16c; lower grades hard to sell at any price. Beeswax strong at 27@30c.
THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 21.—Our market has not been so empty of comb honey in a long time. Fancy white comb, 15@16c; No. 1, 15c; dark and buckwheat, 13@14c. Extracted, buckwheat, 6c. Beeswax, 30c.
H. R. WRIGHT.

BOSTON, March 20.—The demand for comb honey remains good. Market ranges as follows: Fancy white, in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c; honey in glass-front cases about one cent less. Extracted, California light amber, 7@7½c; Florida honey, in barrels, 6@6½c.
BLAKE, SCOTT & LEE.

BUFFALO, March 28.—Buffalo is very quiet on honey, except very low grades at very low prices. We quote extra fancy, 14c; No. 1, 12@13c; other grades, 8@10c. Extracted, 5@6c. Beeswax scarce; fancy, 28@30c; dark, 22@25c.
BATTERSON & CO.

CINCINNATI, March 7.—The general tone of the honey market is lower. Water-white comb honey sells from 14@14 c; it is hard to obtain 15c for extra fancy. Extracted has weakened a little, and sells at 5@5½c; fancy, from 6@6½c.
C. H. W. WEBER.

NEW YORK, March 8.—Comb honey is now pretty well cleaned up, and what remains on the market is nearly all fancy and No. 1 white honey. The demand is fairly good at following quotations: Fancy white, 14c; No. 1, 13c; No. 2, 12c. Extracted remains dull at unchanged prices with plenty of supply. Beeswax firm, 29c.

We have just received the first large shipment of comb honey from Cuba; some in tall sections, packed 20 combs to the crate and some in square sections packed 32 combs to the crate, glass front on one side, plain, no-bee-way section. The honey was packed in shipping-carriers, containing 8 of the large and 9 of the small crates respectively, and arrived in first-class condition. The flavor of this honey is very fine, and as to the quality—some of it is fancy white, while others is of a yellowish tint.
HILDRETH & SHOELKEN.

SAN FRANCISCO, March 12.—White comb, 11@12½ cents; amber, 8@10c; dark, 6@7 cents. Extracted, white, 5½@—; light amber, 4½@5c; amber, 4@— Beeswax, good to choice, light, 26@28c; dark, 24@25c.

While spot stocks are of rather light volume, holders show more inclination to unload than they did a month ago. Although quotable values are without marked change, concessions are granted to buyers which would not have been thought of at the beginning of the year. A large proportion of the honey now offering is comb of medium grade.

WANTED. EXTRACTED HONEY

—either large or small lots; parties having same to offer, send samples, and best prices delivered at Cincinnati, Ohio. We pay cash on delivery. **THE FRED W. MUTH CO.,** 10A1f Front and Walnut Sts., CINCINNATI, O.

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Northern SEEDS

Our handsome seed catalogue for 1902 will interest you. It tells about Corn Insurance, Perfected Farm Seeds. Best varieties. Reasonable prices. Extraordinary free premiums. It's mailed Free to seed buyers. Write for it to-day.
NORTHROP, KING & CO., Seed Growers, Minneapolis, Minn.

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We have a Large Stock on hand
and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors

OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Founda-
tion are ahead of everything, and cost no more
than other makes. New Catalog and copy of
THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GERRISH, East Nottingham, N. H.,
carries a full line of our goods at catalog prices.
Order of him and save freight.

Tip-Top Glass Honey-Jars



The picture shown
herewith represents the
best one-pound jar for
honey that we know of.
It is made of the clear-
est flint glass, and when
filled with honey, and a
neat label attached, it
makes as handsome a
package as can be im-
agined. Its glass top
sets on a flat rubber
ring, and is held in
place by a flat steel
spring across the top as
shown in the picture. It
is practically air-tight,
thus permitting no leak,

which is an important thing with honey-
sellers.

We can furnish these jars, f.o.b. Chicago,
at these prices: One gross, \$5.00; two gross,
\$4.75 a gross; five or more gross \$4.50 per
gross.

If you try them once you will likely use no
other kind of top or sealing arrangement for
honey jars.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

California! If you care to know of its
Fruits, Flowers, Climate
or Resources, send for a sample copy of Cali-
fornia's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural
paper of the Pacific Coast. Published weekly,
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ple copy free.

PACIFIC RURAL PRESS,
330 Market Street, SAN FRANCISCO, CAL.



45A26t Mention the American Bee Journal.

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Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY
ESSENTIAL necessary to make it the BEST
and MOST desirable in all respects. My PRO-
CESS and AUTOMATIC MACHINES are my
own inventions, which enable me to SELL
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Work Wax Into Foundation For Cash

at prices that are the lowest. Catalog giving

Full Line of Supplies,

with prices and samples, free on application
BEESWAX WANTED.

GUS. DITTMER, Augusta, Wis.

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We guarantee Satisfaction. What more can anybody do? BEAUTY,
No LOSS. PATENT WEED-PROCESS SHEETING. PURITY, FIRMNESS, No SAUCING.

Why does it sell so well? Because it has always given better satis-
faction than any other. Because in 24 years
there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies

OF ALL
KINDS *****



Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs
for sale at very low prices.

Langstroth on the Honey-Bee—Revised,

The classic in Bee-Culture—Price, \$1.25, by mail.

BEESWAX wanted
at all times....

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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THE DANZENBAKER HIVE

The best comb-honey hive on the market may be obtained of The A. I.
Root Co., of Medina, Ohio; at any of their branch houses, and many of their
local and jobbing agencies. Send to the address nearest you, and save freight,
and get quick delivery.

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The A. I. Root Co., Syracuse, N. Y.
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The A. I. Root Co., 1024 Miss St., St. Paul, Minn.
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Jos. Nysewander, Des Moines, Iowa.
Jno. Nebel & Son, High Hill, Montgomery Co., Mo.
Prothero & Arnold, Du Bois, Clearfield Co., Penn.
Carl F. Buck, Augusta, Butler Co., Kan.
W. W. Cary & Son, Lyonsville, Mass.
The L. A. Watkins Mds. Co., Denver, Colo.

Would you increase your profits? Then try the Danz. Hive. It's used
from Maine to California. Read the following:

MECHANIC FALLS, MAINE, Feb. 23, 1902.

THE A. I. ROOT COMPANY, Medina, Ohio.

GENTLEMEN:—I AM VERY, VERY pleased that you are willing I should
recommend the Danz. Hive. I have had a great many inquiries regarding it,
and have not felt at liberty to recommend it over our regular hives. At first I
was prejudiced against it, but the sales have increased without recommenda-
tions, and wherever I have sold they have bought again and praised the hive
with extravagant claims, and I am forced to the conclusion that it is the BEST
COMB-HONEY HIVE on the market.
J. B. MASON.
Manager North-eastern Branch The A. I. Root Co.

The above unsolicited testimonial speaks for itself.

M. H. Mendleson, of California, has just ordered 700 Danzenbaker supers.
Sales are doubling every year. Still the demand for honey in Danz. sections is
greater than the supply. If you are wise you will raise comb honey in Danz.
hives.

THE A. I. ROOT CO., MEDINA, OHIO, U.S.A.

GEORGE W. YORK & CO., 144 & 146 Erie Street,
CHICAGO, ILL.,
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for
their free Catalog.